Geoscientific
Model Development

*Supplement of*

# DELWAVE 1.0: deep learning surrogate model of surface wave climate in the Adriatic Basin

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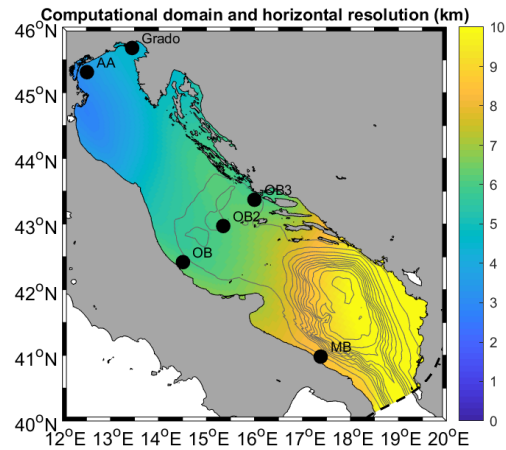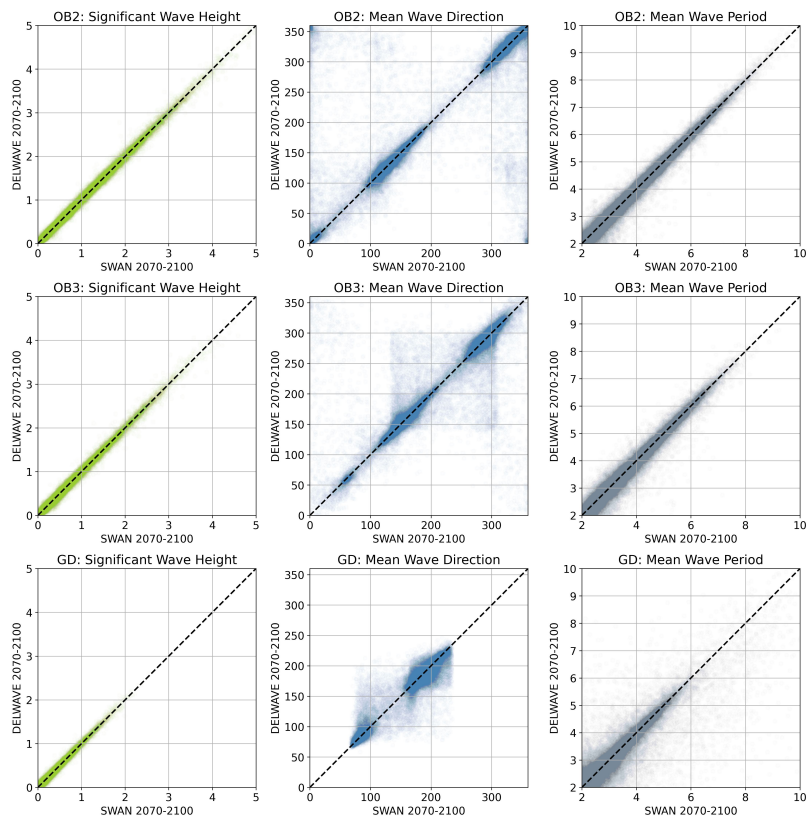*Correspondence to:* Peter Mlakar (peter.mlakar@gov.si) and Matjaž Ličer (matjaz.licer@gov.si)

# S 1 Results

## S 1.1 Deep Network vs SWAN under far future climate 2071-2100

In this section we present supplementary material on DELWAVE performance during the far future period of 2071-2100, as benchmarked against SWAN simulations. Figure S 2 depicts DELWAVE-SWAN heatmaps of $H_S$, $d$ and $T_{m-1,0}$ at the locations of OB2, OB3 and GD, see Figure S 1 for locations.



**Figure S 1.** Geographical domain, validation stations and locations considered in SWAN and DELWAVE modeling.

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**Figure S 2.** DELWAVE forecasts vs SWAN targets for locations OB2 (top row), OB3 (middle row) and GD (bottom row). Mean wave directions are listed in nautical notation ($0° =$ North, $90° =$ East, etc.). Dashed diagonal line indicates a perfect forecast.